



HEATING SERVICES LAYOUT

LEGEND OF SYMBOLS

	SURFACE RUN PIPEWORK		2-PART ROOM MOTORISED VALVE (LINKED TO BMS SYSTEM)	H/L	HIGH LEVEL
	DROP/RISE IN PIPEWORK		WALL MOUNTED ROOM THERMOSTAT (LINKED TO BMS SYSTEM)	L/L	LOW LEVEL
	PIPEWORK AT HIGH LEVEL ABOVE CEILING (NON VISIBLE)		CONTROL WIRING	T.B.	TO BELOW
	PIPEWORK ROUTE BELOW FLOOR LEVEL FROM HEATING MANIFOLD ARRANGEMENT		F&R FLOW AND RETURN	F.B.	FROM BELOW
	RECESSED RADIATOR C/W 16mm F&R UNDERGROUND PIPEWORK PIPED BACK TO CENTRALLY LOCATED MANIFOLD		TRV THERMOSTATIC RADIATOR VALVE	T.A.	TO ABOVE
			LSV LOCKSHIELD RADIATOR VALVE	F&R	FLOW AND RETURN
			IV ISOLATION VALVE	F&R	FLOW AND RETURN HEATING MANIFOLDS
			EXTERNAL TEMPERATURE SENSOR		COMMISSIONING SET
			EXTERNAL FROST STAT		

* DENOTES RADIATOR NUMBER FOR RECESSED RADIATOR

READ SERVICES FROM TOP TO BOTTOM

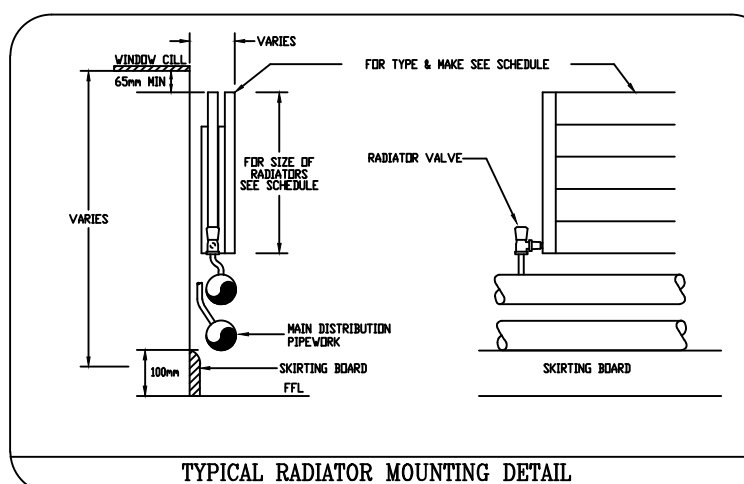
READ SERVICES FROM LEFT TO RIGHT

HEATING SERVICES NOTES:

- ALL SERVICES AS SHOWN ON THIS DRAWING SHALL BE INCLUDED IN THE FINAL TENDER PRICE.
- SAMPLE OF ALL EQUIPMENT SHALL BE APPROVED BY CLIENT, ARCHITECT AND BUILDING SERVICES ENGINEER PRIOR TO ORDERING.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY SUITABLE FINAL ROUTES FOR PIPEWORK.
- AUTOMATIC AIR VENTS TO BE FITTED AT ALL HIGH POINTS THROUGHOUT THE PIPEWORK SYSTEM. DRAIN COCKS TO BE FITTED AT ALL LOW POINTS THROUGHOUT THE SYSTEM.
- THE CONTRACTOR SHALL ENSURE ALL RADIATORS ARE MEASURED IN RELEVANT LOCATIONS PRIOR TO ORDERING.
- FINAL LOCATIONS OF ALL RADIATORS TO BE CO-ORDINATED ON SITE WITH FIXED FURNITURE LAYOUTS. ALL PERIMETER RADIATORS SHALL BE CENTERED UNDERNEATH WINDOWS WHERE POSSIBLE.
- PIPEWORK TO RADIATORS IN THE ASD UNIT SHALL BE RUN IN THE CONCRETE FLOOR SLAB FROM THE CENTRALLY LOCATED F&R HEATING MANIFOLDS TO EACH RADIATOR AS INDICATED. PIPEWORK SHALL BE PRE-INSULATED PLASTIC PIPE WITH AN OXYGEN BARRIER AND SHALL BE A CONTINUOUS 'PIPE WITHIN A PIPE' INSTALLATION. THE PIPEWORK MUST BE PRE-INSULATED AND SLEEVED IN SUCH A MANNER THAT IT CAN BE FULLY WITHDRAWN AND RE-INSTALLED AT ANY TIME. EXTENSION PIECES FROM RADIATORS TO THE UPSTAND PIPES SHALL NOT BE ACCEPTABLE.
- ALL F&R UNDERGROUND PIPEWORK FROM EACH RADIATOR IN THE ASD UNIT AS INDICATED SHALL BE INDIVIDUALLY PIPED BACK TO THE CENTRALLY LOCATED MANIFOLDS AND PIPEWORK SHALL BE 16mm F&R PIPE WITHIN A PIPE. ALL 2-PORT VALVES FOR THE ROOMS SHALL BE INSTALLED AT THE MANIFOLD LOCATION, WHICH IS IN THE STORE ROOM AND SHALL BE WIRED TO THE TEMPERATURE STAT IN EACH ROOM AS INDICATED.
- ELSEWHERE (APART FROM THE ASD UNIT) THE HEATING PIPEWORK BELOW CEILING LEVEL SHALL BE SURFACE MOUNTED THROUGHOUT. WHERE POSSIBLE, ALL DROPS TO RADIATORS IN CORRIDORS, SHALL BE LOCATED IN ADJOINING ROOMS. ALL SURFACE MOUNTED PIPEWORK BELOW CEILING LEVEL IN THE ASD UNIT SHALL BE BOXED-IN AND COVERED. ADVISE AND LIAISE WITH THE MAIN CONTRACTOR ON THIS.
- ALL EQUIPMENT TO HAVE LOCAL ISOLATING VALVES.
- ALL DIMENSIONS IN mm, UNLESS STATED OTHERWISE
- RADIATOR CONNECTIONS SHALL BE BOTTOM OPPOSITE END UNLESS OTHERWISE STATED RADIATOR CONNECTIONS TO BE 15mm FOR RADIATORS UP TO 4000 WATTS & 22mm ABOVE 4000 WATTS. ALL CONNECTIONS TO RADIATORS SHALL BE Ø15mm, UNLESS INDICATED OTHERWISE.
- ALL EQUIPMENT TO HAVE LOCAL ISOLATING VALVES.
- ALLOW FOR INSTALLING 2-PORT VALVES C/W STAT ON PIPEWORK TO RADIATORS IN ALL TEACHING SPACES, OFFICES AND OTHER OCCUPIED ROOMS AS INDICATED. SEE DETAIL ON DRAWING FOR PIPING ARRANGEMENT OF 2-PORT VALVES IN ROOMS, AS INDICATED. SOME 2-PORT VALVES FOR ROOMS SHALL BE LOCATED ABOVE THE CEILING AND FOR ROOMS IN THE ASD UNIT, THE 2-PORT VALVE SHALL BE LOCATED AT THE F&R HEATING MANIFOLD.
- ALL PIPEWORK IS SIZED BASED ON A FLOW TEMPERATURE OF 80 DEGREES CELSIUS AND A RETURN TEMPERATURE OF 60 DEGREES CELSIUS.
- THERMOSTATIC RADIATOR VALVES ARE TO BE INSTALLED ON RADIATORS AS INDICATED. THEY ARE NOT TO BE PROVIDED IN PUBLIC AREAS UNLESS SHOWN.
- ALL NEW SURFACE MOUNTED & EXPOSED LPHW PIPEWORK FOR THE HEATING SYSTEM PIPEWORK SHALL BE MEDIUM GRADE BLACK MILD STEEL TUBE. ALL UNDERGROUND PIPEWORK TO THE RADIATORS IN THE ASD UNIT SHALL BE A PRE-INSULATED PLASTIC PIPE WITH AN OXYGEN BARRIER AND SHALL BE A CONTINUOUS 'PIPE WITHIN A PIPE' INSTALLATION.
- NEW MAINS RUN OF PIPEWORK SHALL BE INSTALLED IN THE AREAS AS INDICATED. THIS IS INDICATIVE ONLY AND IF THE CONTRACTOR FINDS A MORE CONVENIENT ROUTE FOR PIPEWORK ABOVE THE CEILING ON SITE THEN THAT WILL BE ACCEPTABLE.

GENERAL NOTES:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL MECHANICAL, ELECTRICAL, ARCHITECTURAL AND STRUCTURAL DRAWINGS & SPECIFICATIONS.
- THE CONTRACTOR SHALL CO-ORDINATE FULLY WITH ALL OTHER TRADES BEFORE COMMENCING WORK. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL THE NECESSARY INFORMATION TO ALLOW THE MAIN CONTRACTOR CO-ORDINATE ALL SERVICES.
- THE MECHANICAL CONTRACTOR SHALL ALLOW FOR CO-ORDINATING THE MECHANICAL INSTALLATION WITH THE ELECTRICAL CONTRACTOR ON SITE. EXTRA COSTS INCURRED DUE TO THE CO-ORDINATION EXERCISE NOT BEING COMPLETED WILL NOT BE ACCEPTED BY THE ENGINEER.
- DO NOT SCALE THIS DRAWING. ALL DIMENSIONS TO BE TAKEN ON SITE.
- THE CONTRACTOR SHALL ALLOW FOR THE SUPPLY AND INSTALLATION OF ALL MECHANICAL SERVICES INDICATED ON THIS DRAWING.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY SUITABLE FINAL ROUTES FOR PIPEWORK, MECHANICAL SERVICES, ETC. AS INDICATED ON THE DRAWINGS.
- NEW MAINS RUN OF MECHANICAL PIPEWORK SHALL BE INSTALLED IN THE AREAS AS INDICATED. THIS IS INDICATIVE ONLY AND IF THE CONTRACTOR FINDS A MORE CONVENIENT ROUTE FOR THE MECHANICAL SERVICES ON SITE THEN THAT WILL BE ACCEPTABLE.
- FINAL LOCATION OF ALL ITEMS OF PLANT/EQUIPMENT/PIPEWORK, ETC. SHALL BE AGREED ON SITE WITH THE EMPLOYERS REPRESENTATIVE AND THE CLIENT.
- ALL SERVICES THROUGH FIRE BARRIERS SHALL BE SLEEVED EACH SIDE OF THE BARRIER. THE MAIN CONTRACTOR SHALL ALLOW FOR FIRE PROOFING THE OPES AFTER SERVICES IS INSTALLED.
- THE CONTRACTOR SHALL ALLOW FOR ALL NECESSARY LABOUR, WIRING AND ATTENDANCES IN COMPLETING ALL THE MECHANICAL WORKS AS INDICATED ON THE DRAWINGS AND SPECIFICATIONS.
- ASD UNIT: ALL MECHANICAL SERVICES BELOW CEILING LEVEL FOR THE MECHANICAL INSTALLATION IN THE ASD UNIT SHALL BE RECESSED/CONCEALED AND FINISHED FLUSH WITH THE FINISHED WALL, UNLESS STATED OTHERWISE. LIAISE WITH THE MAIN CONTRACTOR FOR ALL NECESSARY CHASES OR BOXING OUT TO CONCEAL SERVICES IN THE UNIT.
- GENERAL AREAS (EXCLUDING ASD UNIT): THE MECHANICAL INSTALLATION IN THESE AREAS SHALL BE GENERALLY SURFACE MOUNTED.



Radiant Panel Schedule

Location	Ref	Type	Width	Length	Output at Δt 50	Grippe Wire Qty per Unit
Classroom No.8	RP1	Carboline Grid	595	2992	863	8
	RP2	Carboline Grid	595	2992	863	8
	RP3	Carboline Grid	595	2992	863	8
	RP4	Carboline Grid	595	2992	863	8
	RP5	Carboline Grid	595	2992	863	8
	RP6	Carboline Grid	595	2992	863	8
Classroom No.6	RP7	Carboline Grid	595	2992	863	8
	RP8	Carboline Grid	595	2992	863	8
	RP9	Carboline Grid	595	2992	863	8
	RP10	Carboline Grid	595	2992	863	8
	RP11	Carboline Grid	595	2992	863	8
	RP12	Carboline Grid	595	2992	863	8
Central Activity Space	RP13	Carboline Grid	595	2992	863	8
	RP14	Carboline Grid	595	2992	863	8
	RP15	Carboline Grid	595	2992	863	8
	RP16	Carboline Grid	595	2992	863	8
	RP17	Carboline Grid	595	2992	863	8
	RP18	Carboline Grid	595	2992	863	8
SEN Class Base 3	RP19	Carboline Grid	595	2992	863	8
	RP20	Carboline Grid	595	2992	863	8
	RP21	Carboline Grid	595	2992	863	8
	RP22	Carboline Grid	595	2992	863	8
	RP23	Carboline Grid	595	2992	863	8
	RP24	Carboline Grid	595	2992	863	8

Panels are suitable for a T-Bar Ceiling Grid

2m Hanging Sets
FLEXHSE40025097 - Flexi.Hose 40025097 10mmx1/2" MALE 7

1392301 - HERZ 1/2" RL5 Straight Return Valve
1682391 - HERZ 1/2" DR Straight Wheel Valve
1662500 - HERZ Multi-Purpose Key for Return Valve
1025601 - Fill & Drain adaptor for RL5

RADIANT PANEL SCHEDULE

Radiator Schedule							
Location	Ref	Style	Code	Type	Height	Length	Depth
Classroom No.8	R1	Maxi WF	MAXW.059.203.11.233/WF	11	590	630	130
ACC WC 3	R2	Maxi WF	MAXW.059.203.11.233/WF	11	590	630	130
Quietly Room 3	R3	Maxi WF	MAXW.059.203.11.233/WF	11	590	1030	130
Storage 2	R4	Maxi WF	MAXW.059.203.11.233/WF	11	590	630	130
Changing Place	R5	Maxi WF	MAXW.059.163.11.233/WF	11	590	1230	130
Lobby 2	R6	Maxi WF	MAXW.059.203.11.233/WF	11	590	1030	130
AMB WC 3	R7	Maxi WF	MAXW.059.203.11.233/WF	11	590	630	130
AMB WC 2	R8	Maxi WF	MAXW.059.203.11.233/WF	11	590	630	130
Sluice	R9	Maxi WF	MAXW.059.203.11.233/WF	11	590	630	130
Quietly Room 2	R10	Maxi WF	MAXW.059.163.11.233/WF	11	590	1230	130
Storage 1	R11	Maxi WF	MAXW.059.203.11.233/WF	11	590	1030	130
ACC WC 2	R12	Maxi WF	MAXW.059.203.11.233/WF	11	590	630	130
ACC WC 1	R13	Maxi WF	MAXW.059.203.11.233/WF	11	590	630	130
AMB WC 1	R14	Maxi WF	MAXW.059.203.11.233/WF	11	590	630	130
Lobby 1	R15	Maxi WF	MAXW.059.203.11.233/WF	11	590	1030	130
Multi Activity Room	R16	Maxi WF	MAXW.059.123.11.233/WF	11	590	2030	130
Shared Storage	R17	Maxi WF	MAXW.059.203.11.233/WF	11	590	1030	130
SEN Class Base 3	R18	Maxi WF	MAXW.059.203.11.233/WF	11	590	630	130
Quiet Room 1	R19	Maxi WF	MAXW.059.203.11.233/WF	11	590	1030	130
Lobby 3	R20	Maxi WF	MAXW.059.203.11.233/WF	11	590	1030	130
Multi purpose room	R21	Maxi WF	MAXW.059.123.11.233/WF	11	590	2030	130
Mainstream Classroom 1	R22	Maxi WF	MAXW.059.123.11.233/WF	11	590	2030	130
Mainstream Classroom 1	R23	Maxi WF	MAXW.059.123.11.233/WF	11	590	2030	130
Mainstream Classroom 1	R24	Maxi WF	MAXW.059.163.11.233/WF	11	590	1430	130
Mainstream Classroom 1	R25	Maxi WF	MAXW.059.203.11.233/WF	11	590	630	130
ACC WC 4	R26	Maxi WF	MAXW.059.203.11.233/WF	11	590	630	130
ACC WC 5	R27	Maxi WF	MAXW.059.203.11.233/WF	11	590	630	130

RADIATOR SCHEDULE

T1	22.07.2026	K. DAVITT	G. BENNDORF
REV	DATE	PREPARED BY/PROJECT ENGINEER	QUALITY CHECK BY:

M&E CONSULTANT



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Drawing Status

TENDER

Job Title

ST. CATHERINE'S NATIONAL
SCHOOL,
RUSH,
CO. DUBLIN.

Drawing Title

HEATING SERVICES LAYOUT
GROUND FLOOR

Architect M'LOUGHLIN ARCHITECTURE
Unit 4B, Elm House
Millennium Park, Naas
Co.Kildare, Ireland

Scale: 1:150 @ A1
Job No. 21-093

Drawn By: K. DAVITT
Drawing No. 56(M001)

Rev.

T1